

REMARKS

This paper is being provided in response to the July 27, 2004 Office Action for the above-referenced application. In this response, Applicants have amended claims 1, 22, 26, 36, 39, and 47 in order to clarify that which Applicants deem to be the invention. Applicants respectfully submit that the amendments to the claims are all supported by the originally-filed application. See, for example, the disclosure in the paragraph beginning at line 3 on page 12 of the originally-filed application.

The objection to claims 36 and 39 because of informalities has been addressed by claim amendments provided herein in accordance with the guidelines set forth in the Office Action. Accordingly, Applicants respectfully request that this objection be withdrawn.

The rejection of claims 1-16, 18-42, and 44-50 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,338,141 to Wells. (hereinafter "Wells") in view of Frisch Essential System Administration (hereinafter, "Frisch") and Kim "The Design and Implementation of Tripwire: A File System Integrity Checker" (hereinafter "Kim") is hereby traversed and reconsideration thereof is respectfully requested in view of amendments to claims contained herein.

Claim 1, as amended herein, is for a method of detecting computer viruses. The method includes providing a disk space having at least a portion that is partitioned into separate segments, each segment being accessed by at least one of a plurality of hosts,

where a first one of the segments is accessed using a different file system than a second one of the segments, an antivirus unit, that uses a particular operating system, scanning at least part of the disk space for viruses, where the part of the disk space that is scanned by the antivirus unit includes at least some parts of the first and second segments, and the antivirus unit accessing non-native files created using operating systems different from the particular operating system that is used by the antivirus unit in connection with scanning at least parts of the disk space for viruses. Claims 2-21 depend, directly or indirectly, from claim 1.

Claim 22, as amended herein, recites a method of scanning a storage device for viruses. The method includes performing a first virus scan at a first time and performing a second virus scan at a second time after the first time, where for the second virus scan, logical entities having a date of last modification that is after the first time are examined and where performing the first and second virus scans includes using a particular operating system and accessing non-native files created using operating systems different from the particular operating system. Claims 23-25 depend, directly or indirectly, from claim 22.

Claim 26, as amended herein, recites a computer program product for detecting computer viruses. The computer program product is recited as including means for accessing a disk space having at least a portion that is partitioned into separate segments, each segment being accessed by at least one of a plurality of hosts, where a first one of the segments is accessed using a different file system than a second one of the segments,

means that uses a particular operating system for scanning at least part of the disk space for viruses, where the part of the disk space that is scanned includes at least some parts of the first and second segments, and means for accessing non-native files created using operating systems different from the particular operating system that is used in connection with scanning at least parts of the disk space for viruses. Claims 27-35 depend, directly or indirectly, from claim 26.

Claim 36, as amended herein, recites a computer program product for scanning a storage device for viruses. The computer program product is recited as including means for performing a first virus scan at a first time and means for performing a second virus scan at a second time after the first time, where for the second virus scan, logical entities having a date of last modification that is after the first time are examined and where performing the first and second virus scans includes using a particular operating system and accessing non-native files created using operating systems different from the particular operating system. Claims 37 and 38 depend from claim 36.

Claim 39, as amended herein, recites an antivirus scanning unit that includes means for coupling to at least one storage device having at least a portion that is partitioned into separate segments, each segment being accessed by at least one of a plurality of hosts, wherein a first one of the segments is accessed using a different file system than a second one of the segments; means for using a particular operating system for scanning at least part of the at least one storage device for viruses, where the part that is scanned includes at least some parts of the first and second segments; and means for

accessing non-native files created using operating systems different from the particular operating system that is used in connection with scanning at least parts of the disk space for viruses. Claims 40-46 depend, directly or indirectly, from claim 39.

Claim 47, as amended herein, recites an antivirus unit, that includes means for performing a first virus scan at a first time and means for performing a second virus scan at a second time after the first time, where for said second virus scan, logical entities having a date of last modification that is after the first time are examined and where performing the first and second virus scans includes using a particular operating system and accessing non-native files created using operating systems different from the particular operating system. Claims 48-50 depend from claim 47.

As set forth on page 3 of the Office Action, Wells discloses a method of detecting computer viruses on a single, stand-alone computer system or on a networked machine using an antivirus unit, but Wells does not expressly disclose providing a disk space having at least a portion that is partitioned into separate segments, each segment being accessed by at least one of a plurality of hosts, wherein a first one of the segments is accessed using a different file system than a second one of the segments.

As set forth on pages 3 and 4 of the Office Action, Frisch teaches a UNIX operating system that enables a flexible partitioning capability wherein each partitioned segment is accessed using a different file system.

As set forth on page 4 of the Office Action, Kim teaches selectively checking the integrity of separate file systems on a disk using the UNIX tool tripwire.

Applicants respectfully submit that none of the cited references, alone or in combination, show, teach, or suggest the feature currently recited in the independent claims of the present application where scanning for viruses is performed using a particular operating system to scan files created using an operating system different from the particular operating system. This feature of the present claimed invention addresses the difficulties with conventional virus checking systems (like Wells) indicated in the Background section of the present application (see, for example, the paragraph beginning at the bottom of page 2 of the Office Action).

Since Wells discloses a method of detecting computer viruses on a single, stand-alone computer system or on a networked machine using an antivirus unit, then Wells does not teach or suggest the feature of scanning for viruses using a particular operating system to scan files created using an operating system different from the particular operating system. Furthermore, Frisch and Kim are both directed to systems that use the UNIX operating system, both for creation of the files that are scanned and for the scanning of those files. Thus, neither Frisch or Kim teach or suggest scanning for viruses using a particular operating system to scan files created using an operating system different from the particular operating system, as recited in one form or another in all of the independent claims of the present application. That is, for both Frisch and Kim, the files are created using UNIX and the virus scanning is performed also using UNIX,

contrary to the express recitation in the independent claims of the present application, as currently amended herein. Therefore, neither Wells, Frisch, nor Kim, alone or in any combination, show, teach, or suggest features of the present independent claims, as amended herein. Accordingly, Applicants respectfully request that this rejection be reconsidered and withdrawn.

The rejection of claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Wells in view of Frisch and Kim and further in view of Stang "Comparison: Products to Detect Changes to Programs" (hereinafter "Stang") is hereby traversed and reconsideration thereof is respectfully requested in view of amendments to claims contained herein.

Claim 17 depends from claim 1, discussed above.

Wells, Frisch, and Kim are also discussed above.

As set forth on page 15 of the Office Action, Stang discloses several integrity checkers that scan disk space independently of any file structures corresponding to the disk space.

Applicants respectfully submit that the addition of the Stang reference does not overcome the deficiencies of Wells, Frisch, and Kim with respect to claim 1, discussed

above, from which claim 17 depends. Accordingly, Applicants respectfully request that this rejection be withdrawn.

The rejection of claim 43 under 35 U.S.C. § 103(a) as being unpatentable over Wells in view of Frisch and Kim and further in view of U.S. Patent No. 6,088,803 to Tso, et al. (hereinafter "Tso") is hereby traversed and reconsideration thereof is respectfully requested in view of amendments to claims contained herein.

Claim 43 depends from claim 42, which depends from claim 39, discussed above.

Wells, Frisch, and Kim are also discussed above.

As set forth on page 16 of the Office Action, Tso discloses an antivirus accelerator for computer networks wherein an antivirus unit is interposed between a storage device and a host.

Applicants respectfully submit that the addition of the Tso reference does not overcome the deficiencies of Wells, Frisch, and Kim with respect to claim 39, discussed above, from which claim 43 ultimately depends. Accordingly, Applicants respectfully request that this rejection be withdrawn.

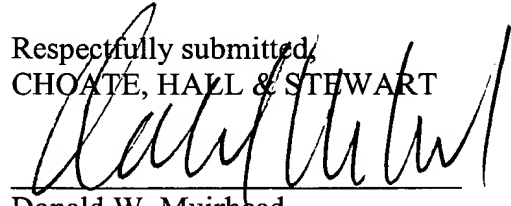
Based on the above, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 617-248-4038.

October 19, 2004

Date

Choate, Hall & Stewart
Patent Group
Exchange Place
53 State Street
Boston, MA 02109-2804

Respectfully submitted,
CHOATE, HALL & STEWART



Donald W. Muirhead
Reg. No. 33,978